

## DISCUSSION OF SIGNIFICANT STAKEHOLDER COMMENTS AND STAFF PATH FORWARD ON INTENTIONAL MIXING OF CONTAMINATED SOIL

### SUMMARY OF DRAFT GUIDANCE

In NUREG-1757, Draft Supplement 1, "Consolidated NMSS Decommissioning Guidance: Updates to Implement the License Termination Rule Analysis," the U.S. Nuclear Regulatory Commission (NRC) staff updated Section 17.1.3, "Soil," and prepared a new Section 15.13, "Use of Intentional Mixing of Contaminated Soil," for inclusion in NUREG-1757, Vol.1, Rev. 1. The staff provided guidance on continuing the current practice of using mixing to meet the waste acceptance criteria (WAC) of disposal facilities. Guidance is also provided on the use of intentional mixing of contaminated soil to meet the License Termination Rule (LTR) criteria (10 CFR Part 20, Subpart E), in limited circumstances, on a case-by-case basis. The guidance addresses the limitations for when intentional mixing to meet the LTR can be used and the minimum requirements for when NRC may consider accepting such a proposal. The draft guidance describes the information that must be included in a decommissioning plan or license termination plan, to support the use of intentional mixing.

### SUMMARY OF STAKEHOLDER COMMENTS ON DRAFT GUIDANCE AND STAFF CONSIDERATIONS

Three States, one licensee, one solid waste industry association, and one private citizen provided comments.

#### General Comments

One commenter questioned the need for some of the options and flexibility in the guidance and opposed the use of clean soil from outside the contaminated footprint to be used in mixing. This commenter suggested specific changes to the guidance, based on these oppositions. Another commenter supported the use of intentional mixing. A third commenter opposed the use of intentional mixing to meet WAC and to meet the LTR criteria and had several specific comments on the guidance. This commenter stated that this issue should be addressed through rulemaking rather than guidance. Another commenter supported the use of mixing to meet WAC, expressed some reservation with the use of mixing to meet the LTR criteria, and fully opposed mixing uncontaminated or clean soils with contaminated soil to lower concentrations.

**Staff considerations:** The staff acknowledges that some commenters support and some oppose the use of mixing to meet WAC and to meet the LTR criteria. The staff believes that the general concepts described in the draft guidance are sound. In response to these comments, the staff plans changes to clarify the guidance, but does not plan to change the general intent or policy.

#### Comments Suggesting Increased Flexibility

One of the limitations on use of mixing described in SECY-04-0035 ("Results of the License Termination Rule Analysis of the Use of Intentional Mixing of Contaminated Soil,"

March 1, 2004) and included in the draft guidance is that clean soil, from outside the footprint of the area containing the contaminated soil, should not be mixed with contaminated soil to lower concentrations. The staff would consider rare cases where using clean soil from outside the footprint of the area containing contaminated soil is the only viable alternative to achieving the dose levels of the LTR. In the guidance, the staff also proposed that clean soil from outside the site boundary or from offsite should not be used for mixing.

One commenter suggested changes that would add some flexibility and clarification to the guidance on this limitation. First, the commenter suggested that the word “rare” be removed, in reference to cases of using clean soil for intentional mixing. Second, the commenter suggested that the staff remove the limitation on use of clean soil from outside the site boundary. The commenter stated that the important issue was whether mixing was the only viable approach to achieve an adequate remediation.

**Staff considerations:** The staff believes that the commenter’s suggestions are reasonable and increase the flexibility afforded to the use of mixing, without a change to the essence of the limitation to use clean soil for mixing when that is the only viable option to achieve the dose criteria of the LTR. The staff believes that the final decision on allowing the mixing, even with more flexibility, will remain a case-by-case, risk-informed decision, protective of public health and the environment. The staff believes that these changes are within the policy approved by the Commission (SECY-04-0035 and associated Staff Requirements Memorandum, dated May 11, 2004). Thus, the staff plans to add to the guidance the flexibility and clarifications that were proposed.

#### Mixing to Change Waste Classifications

The draft guidance on intentional mixing to meet WAC provided a limitation that the classification of the waste, as determined by the requirements of 10 CFR 61.55, is not altered.

One commenter suggested that mixing should be allowed, with Commission consultation, in some cases to reduce classification of waste for disposal sites regulated under 10 CFR Part 61. Another commenter thought mixing should not be used for changing waste classification, for low-level waste and for other wastes not subject to Part 61.

**Staff considerations:** In SECY-04-0035, the staff noted that NRC current practice does not allow waste classification to be changed intentionally by mixing, and the draft guidance would maintain this practice. However, the staff acknowledged that it has not focused on the continued appropriateness of that practice, given changes to low-level waste disposal since Part 61 was finalized. The staff mentioned this issue at a March 22, 2006, briefing of the Advisory Committee on Nuclear Waste (ACNW), at which the staff discussed the stakeholder comments on Draft Supplement 1 and the staff’s path forward for finalizing the guidance. The ACNW stated that this issue may be considered in a white paper that the ACNW is developing, which should be completed in Spring 2006. The staff does not plan to change the guidance on waste classification at this time, but may make changes in future updates to the decommissioning guidance, as appropriate.